



July 2019

WATER RESOURCES PROJECTS

Army Corps of Engineers Can Further Enhance Acceleration of Feasibility Studies

Accessible Version

Why GAO Did This Study

Water resources development projects undertaken by the Corps—such as those to reduce the risks from coastal storms—historically have taken years or even decades to complete. To implement these projects, the Corps first conducts a feasibility study, which includes an analysis of the federal interest and the costs, benefits, and environmental impacts of a project; such studies can take several years to complete.

WRRDA 2014 requires the Corps to, among other things, conduct activities to accelerate the completion of feasibility studies. The act also includes a provision for GAO to assess acceleration reforms. This report examines the extent to which the Corps has (1) addressed the WRRDA 2014 feasibility study acceleration provisions, (2) reviewed the impact of its feasibility study acceleration reforms, and (3) maintained complete milestone data for its studies. GAO reviewed WRRDA 2014 and Corps documents; reviewed 19 feasibility studies subject to the act's acceleration provisions; analyzed data on key milestones; and interviewed Corps officials and stakeholders.

What GAO Recommends

GAO is making three recommendations to the Department of Defense to direct the Assistant Secretary of the Army for Civil Works to (1) develop a plan with resource estimates to address the remaining WRRDA 2014 provisions, (2) develop a plan to comprehensively evaluate the impacts of the agency's acceleration reforms, and (3) clarify its policy to help ensure district officials enter data on required milestones for feasibility studies in its central data system. The agency concurred with the recommendations.

View [GAO-19-561](#). For more information, contact Anne-Marie Fennell at (202) 512-3841 or fennella@gao.gov.

WATER RESOURCES PROJECTS

Army Corps of Engineers Can Further Enhance Acceleration of Feasibility Studies

What GAO Found

The U.S. Army Corps of Engineers has taken steps to address some feasibility study acceleration provisions under the Water Resources Reform and Development Act of 2014 (WRRDA 2014) but not others. For example, to implement a provision related to coordination, the Corps in September 2015 issued guidance emphasizing the importance of early coordination with other federal agencies to avoid delays later in the process. However, the Corps has not taken steps to address other provisions, such as one that calls for the Corps to establish a database to make publicly available information on the status of feasibility studies, citing resource constraints. The Corps does not have a plan to address these other provisions. A plan that includes resource estimates would better position the Corps to address the remaining acceleration provisions.

The Corps regularly monitors feasibility studies and has conducted some reviews of its acceleration reforms, such as an analysis that found that some studies were too complex to complete within the agency's timing and cost requirements—i.e., within 3 years and for less than \$3 million. However, the Corps has not comprehensively evaluated the reforms' impacts. Corps officials and stakeholders expressed differing views on the reforms' impacts on the costs, time frames, and quality of feasibility studies. For example, many Corps officials GAO interviewed said the reforms' overall goals to reduce studies' cost and time frames were positive, but others raised concerns, such as that the \$3 million cost limitation may not be realistic for different geographic areas. Corps officials said they have not conducted a comprehensive impact review in part because they are focused on monitoring ongoing studies. These officials said they see the value in conducting such a review as they complete more studies, but they have not developed a plan to do so. Developing an evaluation plan would help the Corps conduct a timely and effective review.

The Corps has not maintained complete milestone data in its central data system for the 19 feasibility studies GAO reviewed (see figure). For example, 12 studies did not include data for one or more milestones. Corps officials said agency policy requires the entry of information on 10 key milestones in the agency's central data system. However, GAO found that the policy only explicitly requires that two of the key 10 milestones be entered into the agency's central data system. Without clarifying its policy to help ensure officials enter data on all milestones in the central data system, the Corps will not have complete data to efficiently monitor the progress of feasibility studies.

Examples of Waterways with Ongoing Corps Feasibility Studies: Port of Long Beach, CA, and Colorado River Locks, TX



Source: Army Corps of Engineers documents. | [GAO-19-561](#)

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Abbreviations

EIS	environmental impact statement
FWS	Fish and Wildlife Service
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
SMART	Specific, Measurable, Attainable, Risk Informed, Timely
WRRDA 2014	Water Resources Reform and Development Act of 2014

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July 29, 2019

The Honorable John Barrasso
Chairman
The Honorable Thomas Carper
Ranking Member
Committee on Environment and Public Works
United States Senate

The Honorable Peter DeFazio
Chairman
The Honorable Sam Graves
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

Water resources development projects undertaken by the U.S. Army Corps of Engineers—such as those to improve navigation channels or reduce the risks from coastal storms—historically have taken years or even decades to move from conception to completion.¹ This is due in part to the length of time the Corps takes to complete feasibility studies, which include analyses of the federal interest in as well as the costs, benefits, and environmental impacts of the projects. Some feasibility studies have taken more than a decade to complete. For example, a Corps feasibility study reviewing the possible deepening of a navigation channel serving ports in Texas and Louisiana was initiated in March 2000 and completed in July 2011.² In addition, a Corps feasibility study reviewing flood risk management options for the Ala Wai canal watershed in Hawaii was initiated in March 2001 and completed in December 2017.³

¹The Corps has both a military and a Civil Works Program. The military program provides, among other things, engineering and construction services to other U.S. government agencies and foreign governments, while the Civil Works Program is responsible for investigating, developing, and maintaining water resources development projects. This report discusses only the Civil Works Program.

²According to Corps documentation, this feasibility study for the Corps' Sabine-Neches Waterway Channel Improvement project was authorized by a Resolution of the Senate Committee on Environment and Public Works on June 5, 1997.

³The Corps completed this feasibility study under Section 209 the Flood Control Act of 1962. Pub. L. No. 87-874, § 209, 76 Stat. 1180, 1196 (1962).

Recognizing the need to address lengthy time frames for its projects, the Corps initiated changes in February 2012 aimed at improving and streamlining feasibility studies, reducing their costs, and expediting their completion. For example, the Corps established a policy that feasibility studies are to be completed in less than 3 years, at a cost of not more than \$3 million, and with the ongoing involvement of all three organizational levels of the Corps—headquarters, divisions, and districts. The Corps refers to this as the 3x3x3 rule. The Corps also instituted changes in March 2012 in how it conducts risk management—the process of considering risks and taking steps to address those risks—as part of its feasibility study process.⁴ Specifically, Corps officials are to consider the types of risks, as well as the likelihood and consequences of those risks, when making decisions such as whether to conduct additional analysis of a particular issue. A 2015 Corps document stated that previously the Corps’ senior leadership was involved at the end of a feasibility study but since the 2012 changes is now involved early on to understand risks and make related decisions.

The Water Resources Reform and Development Act of 2014 (WRRDA 2014) was subsequently enacted and contains provisions related to, among other things, accelerating the completion of, and improving public transparency around, feasibility studies for which an environmental impact statement (EIS) is conducted.⁵ For example, the Corps is required to establish a database to make publicly available certain information on the status and progress of its feasibility studies. WRRDA 2014 also

⁴The Corps adopted this approach for conducting feasibility studies in 2012, which is part of its initiative referred to as Specific, Measurable, Attainable, Risk Informed, Timely (SMART) Planning.

⁵Pub. L. No. 113-121, § 1005, 128 Stat. 1193, 1199 (2014) (codified at 33 U.S.C. § 2348). These provisions apply to studies initiated after June 10, 2014, for which an EIS is prepared. Under the National Environmental Policy Act of 1969, federal agencies must assess the effects of major federal actions—those they propose to carry out or to permit—that significantly affect the environment. Pub. L. No. 91-190, 83 Stat 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347). Under the National Environmental Policy Act and implementing regulations, federal agencies generally are to prepare either an environmental assessment or a more detailed EIS to evaluate potential environmental effects of a proposed action or project. When an EIS is to be prepared, it must, among other things, (1) describe the environment that will be affected; (2) identify alternatives to the proposed action and identify the agency’s preferred alternative, if any; (3) present the environmental impacts of the proposed action and alternatives; and (4) identify any adverse environmental impacts that cannot be avoided should the proposed action be implemented. 42 U.S.C. § 4332(C); 40 C.F.R. pt. 1502.

codified the Corps' 3x3x3 rule.⁶ Given its own initiatives and the provisions in WRRDA 2014, the Corps is engaged in a wide array of reforms to the feasibility study process, which we refer to in this report as acceleration reforms.

The Corps collects information to manage its feasibility studies in its central data system.⁷ In this system, the Corps maintains data on the dates for key milestones, such as the date the Corps initiates the feasibility study process. According to Corps documents, including these milestone data in the agency's central data system facilitates reporting on the status and progress of its feasibility studies and other projects.

WRRDA 2014 includes a provision for us to assess the Corps' reforms carried out in response to the project acceleration reforms in the act, including an evaluation of certain impacts, and report to Congress 5 and 10 years after enactment of the act. This report examines the extent to which the Corps has (1) addressed the WRRDA 2014 feasibility study acceleration provisions, (2) reviewed the impact of its feasibility study acceleration reforms, and (3) maintained complete milestone data for feasibility studies in its central data system.

To conduct our work, we reviewed the first 19 feasibility studies subject to the WRRDA 2014 acceleration provisions. These include feasibility studies that (1) were initiated after June 10, 2014, the date WRRDA 2014 was enacted, through August 15, 2018, and (2) for which an EIS is

⁶Pub. L. No. 113-121, § 1001(a), 128 Stat. 1193, 1196 (codified at 33 U.S.C. § 2282c(a)). Specifically, section 1001(a) of WRRDA 2014 provides that, to the extent practicable, feasibility studies initiated after the date of enactment of the act shall (1) result in the completion of a final feasibility report not later than 3 years after the date of initiation; (2) have a maximum federal cost of \$3 million; and (3) ensure that personnel from the Corps' district, division, and headquarters levels concurrently conduct the required review.

⁷The central data system, known as P2, is the Corps' project management system. According to Corps documentation, P2 helps to centralize all aspects of project management, including scheduling and financial management. P2 includes an enterprise-wide database for all project data using common milestone codes and definitions to facilitate reporting.

prepared.⁸ We reviewed Corps guidance on the agency's process for planning feasibility studies and other related documentation. We also conducted an in-depth review of seven of these 19 feasibility studies. We selected these seven feasibility studies because they represent different types of water resources development projects, are at varying stages of completion, and are geographically dispersed. The seven studies provide illustrative examples but are not generalizable to all Corps' feasibility studies subject to the WRRDA 2014 acceleration provisions. For each of the seven studies, we reviewed project management plans and other project documents, such as draft feasibility studies, if available. From August 2018 through November 2018, we visited the Corps' four district offices that led these seven studies⁹ to learn more about the status and progress of each feasibility study and the Corps' coordination with other federal agencies and nonfederal sponsors,¹⁰ among other things. We interviewed Corps officials at the three divisions overseeing the districts conducting the seven feasibility studies and representatives from nonfederal sponsors for these studies. We also interviewed officials from federal agencies, such as the Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS).

To examine the extent to which the Corps addressed the WRRDA 2014 feasibility study acceleration provisions, we reviewed the Corps' documentation related to the implementation of those provisions, such as guidance and agency policies. We also interviewed Corps headquarters officials as well as division and district officials from the three divisions and four districts discussed above and obtained related documentation.

To examine the extent to which the Corps has reviewed the impact of its feasibility study acceleration reforms, we reviewed Corps policy, guidance, training, and other documentation on the implementation of

⁸The acceleration provisions in WRRDA 2014 apply to each project study initiated after June 10, 2014, for which an EIS is prepared under the National Environmental Policy Act of 1969. The law authorizes the Corps to apply the acceleration provisions to other project studies as it determines appropriate. 33 U.S.C. § 2348(b)(1). We chose to review studies through August 15, 2018, because after that date the Corps initiated several feasibility studies using funding in a supplemental appropriation received in February 2018 to conduct work in response to recent hurricanes. Corps officials said they planned to use a somewhat different approach to conducting those studies.

⁹We visited the Galveston, Los Angeles, New Orleans, and Sacramento district offices.

¹⁰Nonfederal sponsors can include tribes, counties, states, or local governments that contact the Corps for assistance on a water resources development project.

those reforms.¹¹ We interviewed Corps headquarters officials to learn what, if any, (1) new policies were in place to help division and district officials implement the reforms; and (2) review or analysis headquarters officials had completed of the reforms' impacts on the cost, time frames, or quality of feasibility studies. We compared this information with guidance for program evaluation.¹²

To examine the extent to which the Corps has maintained complete milestone data for feasibility studies in its central data system, we reviewed the Corps' information on the status of the 19 feasibility studies in our review. We also analyzed data from the Corps' central data system on all feasibility studies with an EIS. We assessed the reliability of these data by reviewing related documentation, conducting data testing for any missing data, and interviewing knowledgeable Corps officials, among other things. We determined that the data were sufficiently reliable for the purpose of understanding which districts and divisions conducted feasibility studies and for understanding the types of milestones that were entered into the central data system. However, as discussed in this report, we determined that the milestone data were not sufficiently reliable for other purposes. We reviewed data for the 19 feasibility studies to determine whether they conformed to the Corps' policy on what milestone data should be in its data system. For more information on our objectives, scope, and methodology, see appendix I.

We conducted this performance audit from April 2018 to July 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform our audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹¹By acceleration reforms, we are referring to the requirements that new feasibility studies are to be completed in less than 3 years and at a cost of not more than \$3 million, the Corps' risk management of feasibility studies, and the WRRDA 2014 acceleration provisions.

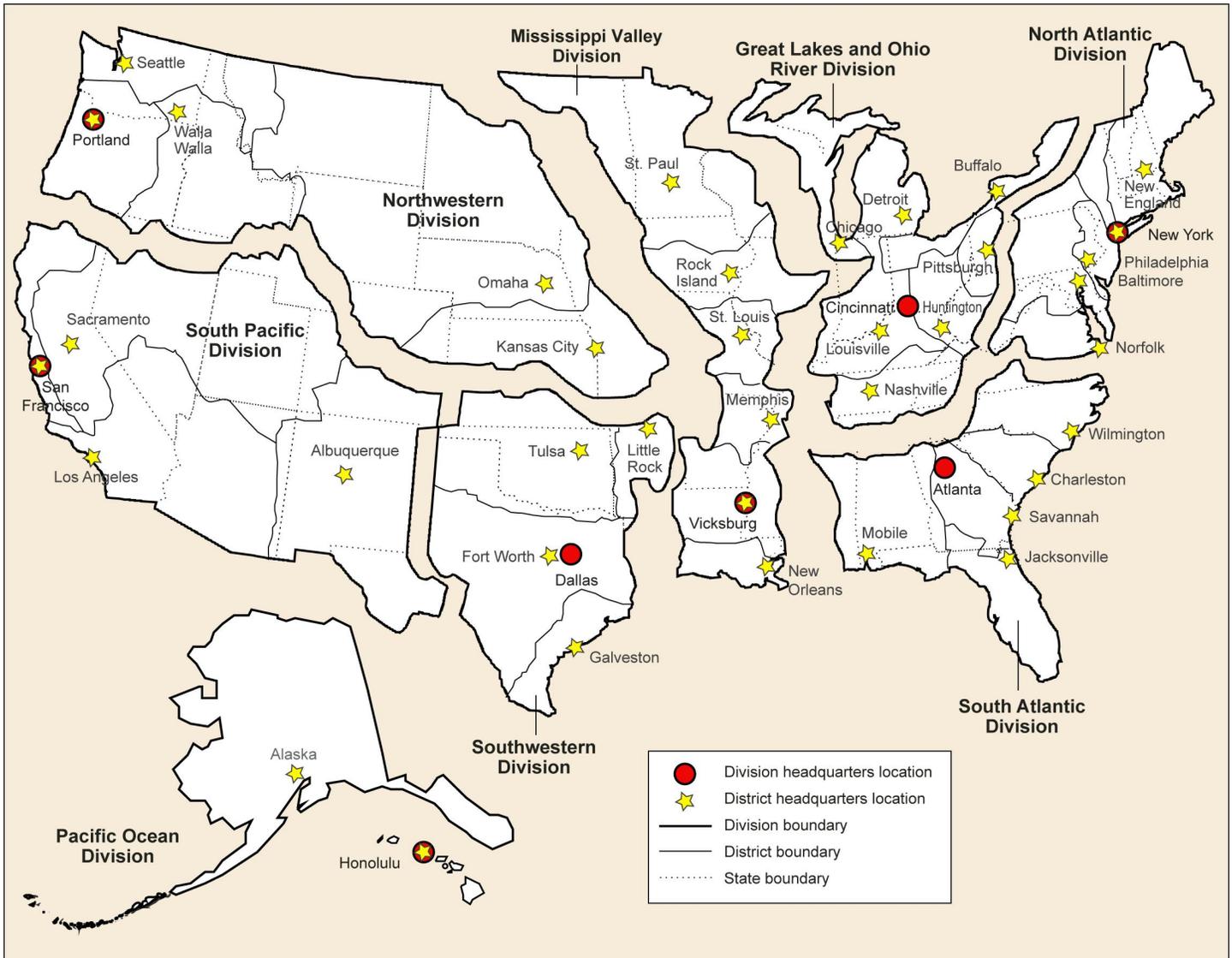
¹²GAO, *Designing Evaluations: 2012 Revision (Supersedes PEMD-10.1.14)*, [GAO-12-208G](#) (Washington, D.C.: Jan. 31, 2012). This is guidance for successfully completing evaluation tasks. It is intended to assist those interested in assessing federal programs and policies plan useful evaluations, among other things.

Background

The Corps is one of the world's largest public engineering, design, and construction management agencies. Located within the Department of Defense, the Corps has both military and civilian responsibilities. Through the civilian Civil Works Program, the Corps plans, constructs, operates, and maintains a wide range of water resources development projects such as navigation and flood risk projects. The Assistant Secretary of the Army for Civil Works, appointed by the President, sets the strategic direction for the program and has principal responsibility for the overall supervision of functions relating to the Army's Civil Works Program.¹³ The Chief of Engineers, a military officer, is responsible for execution of the civil works and military missions. At the Corps level, the Civil Works Program is organized into three tiers: headquarters in Washington, D.C.; eight regional divisions; and 38 local district offices (see fig. 1).

¹³Our review focuses on the Corps' role in conducting feasibility studies for Civil Works projects.

Figure 1: Locations of U.S. Army Corps of Engineers' Divisions and Districts Administering the Civil Works Program



Sources: GAO representation of U.S. Army Corps of Engineers data; Map Resources (map). | GAO-19-561

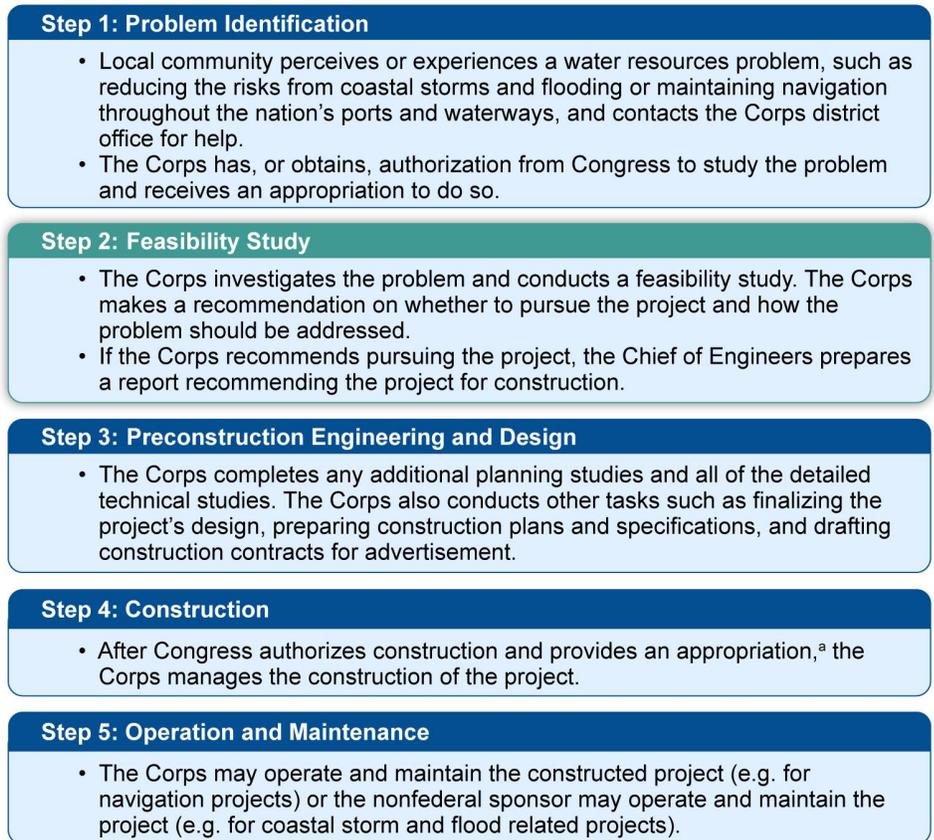
Corps headquarters primarily develops policies and guidance to implement the agency's responsibilities and plans the direction of the organization. The divisions, which were established generally according to watershed boundaries, primarily coordinate the districts' civil works and military projects and are commanded by military officers. The districts, also commanded by military officers, are to, among other things, plan and implement feasibility studies and the resulting water resources

development projects that are approved by the divisions and headquarters.

Major Steps in Corps Water Resources Development Projects

There are several steps in conducting a Corps water resources development project. When a local community perceives a need or experiences a water resources problem that is beyond its ability to solve, it typically contacts the Corps for assistance. These communities and Congress, as well as other entities, play key roles in the process. Figure 2 illustrates the major steps in conducting a Corps water resources development project.

Figure 2: Major Steps in Conducting a U.S. Army Corps of Engineers Water Resources Development Project



Source: GAO presentation of Army Corps of Engineers information. | GAO-19-561

Notes: The Corps conducts all major steps in a water resources development project in coordination with a nonfederal sponsor (e.g., a tribe, county, state, or local government), as applicable.

^aAccording to Corps officials, the Corps can conduct some initial preconstruction engineering and design activities prior to receiving Congressional approval for construction, but the Corps completes this work after authorization.

Corps Feasibility Studies

As identified above, one of the major steps in initiating a water resources development project is conducting a feasibility study. Feasibility studies further investigate a water resources problem and make recommendations on whether a project is in the federal interest, and if so, how the problem should be addressed. Generally, the cost of a feasibility study is shared between the Corps and a nonfederal sponsor, such as a local port authority or a state agency.¹⁴

In 2012, the Corps began using a new approach to conducting feasibility studies, referred to as SMART Planning. As part of this approach, Corps officials are to use and document a risk-informed approach to decision-making. Specifically, Corps officials are to consider risks at each point in the feasibility study process and balance the probability and consequences associated with those risks with the time and costs needed to avoid or mitigate risks through, for example, collecting additional data or conducting additional analysis. By doing so, they are to conduct only the additional analysis needed to make a decision at that point in the process. At each step, Corps officials are to use an approach that balances the level of detail, data collection, research, and associated risks with what is necessary to deliver the feasibility study, and they are to justify any additional work as the best course forward.

The Corps' feasibility study process consists of four phases (scoping, alternative evaluation and analysis, feasibility-level analysis, and Chief's report) and a number of key milestones, such as identifying project

¹⁴The Corps is generally not to initiate a feasibility study for a water resources development project until appropriate nonfederal interests agree, by contract, to contribute 50 percent of the cost of the study, except for a water resources study designed for the purposes of navigational improvements in the nature of dams, locks, and channels on the nation's system of inland waterways. 33 U.S.C. § 2215(a).

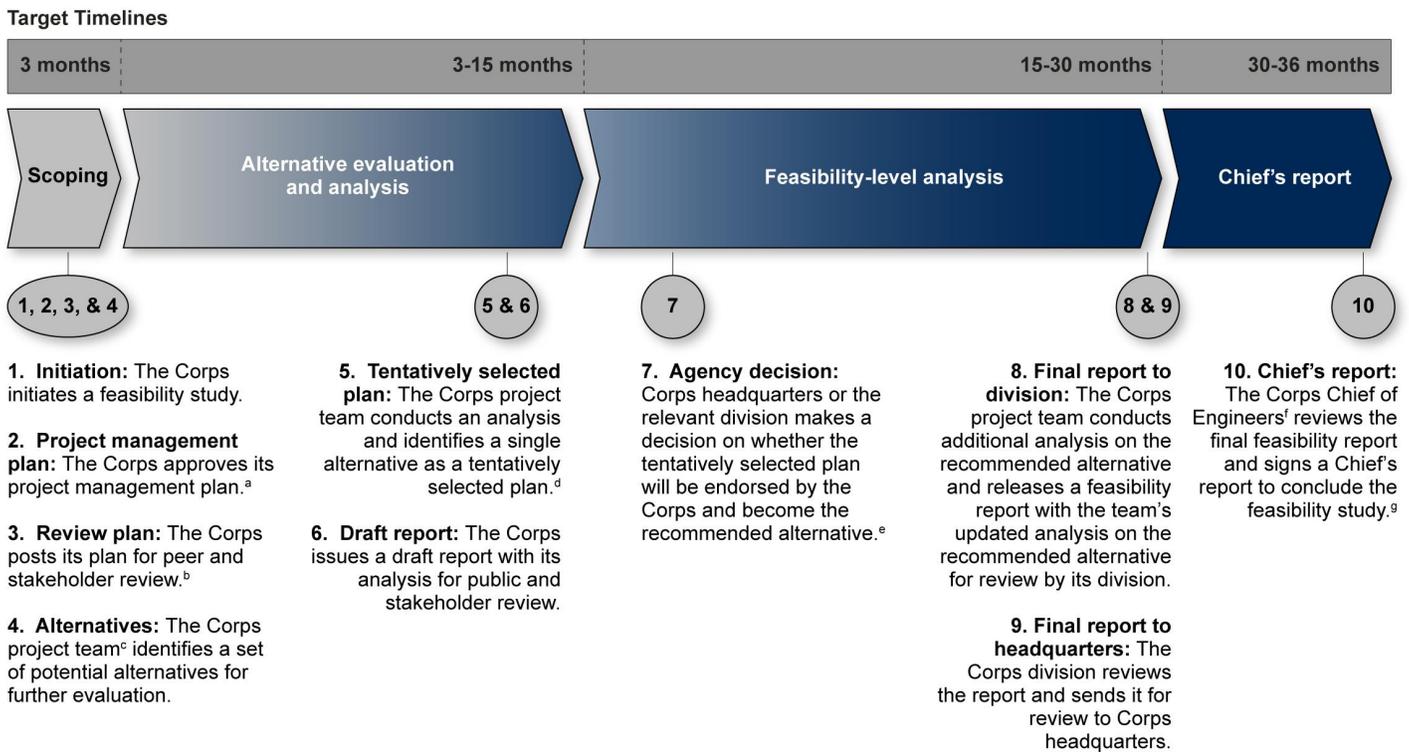
alternatives for further review (see fig. 3).¹⁵ The complete feasibility study process is to take place within the statutory target time frame of less than 3 years (36 months). The Corps uses SMART Planning to help feasibility studies meet the agency's 3x3x3 rule.¹⁶ Corps policy allows the Corps to spend more money and take more time on an unusually complex feasibility study if the district leading the study requests and receives an exemption from headquarters or the Assistant Secretary of the Army for Civil Works. However, Corps policy indicates that such exemptions are not routine and are to be granted only after careful consideration and review by division and headquarters officials. In addition, WRRDA 2014, as amended, provides that the Secretary of the Army may make an exception by extending the timeline of a study if the Secretary determines that the study is too complex to comply with the 3x3x3 rule. The Secretary is not to extend the timeline for a feasibility study for a period of more than 10 years, and any feasibility study that is not completed before that date shall no longer be authorized.¹⁷ The act also requires the Secretary to provide written notice to the Senate Committee on Environment and Public Works and the House Committee on Transportation and Infrastructure each time the Corps grants such an exception.

¹⁵According to Corps documentation, during the scoping phase the Corps develops a plan with tasks and timelines and works with other agencies to gather initial input. During the alternative evaluation and analysis phase, the Corps compares the alternatives, with an emphasis on the outputs and effects that will have the most influence on the decision-making process. During the feasibility-level analysis phase, the Corps conducts additional analysis on the agency's recommended plan to reduce risk and uncertainty. During the Chief's report phase, Corps headquarters conducts a policy review and the Chief of Engineers signs the report. The Corps then sends the report to the Assistant Secretary of the Army for Civil Works, who provides it to Congress for consideration.

¹⁶Corps policy first established this goal in 2012, which was then codified in WRRDA 2014.

¹⁷Specifically, the Corps' implementation guidance for section 1001 of WRDA 2014 provides that under the act, if a study will not be completed within 3 years, the Assistant Secretary of the Army for Civil Works may approve a total of up to 7 additional years to complete the study, as long as the study duration does not exceed 10 years total. See U.S. Army Corps of Engineers, *Revised Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Vertical Integration and Acceleration of Studies as Amended by Section 1330(b) of the Water Resources Development Act (WRDA) of 2018* (Washington, D.C.: March 2019).

Figure 3: U.S. Army Corps of Engineers Feasibility Study Phases, Key Milestones, and Target Timelines



Source: GAO analysis of U.S. Army Corps of Engineers documentation. | GAO-19-561

Notes: This figure describes the Corps' Specific, Measurable, Attainable, Risk Informed, Timely (SMART) Planning process for conducting feasibility studies for water resources development projects adopted in 2012. The Corps conducts all feasibility study activities in coordination with a nonfederal sponsor (e.g., a tribe, country, state, or local government), as applicable.

^aA project management plan outlines a feasibility study's work tasks, level of detail, and timelines for the project.

^bAccording to Corps documentation, a feasibility study's plan for peer and stakeholder review outlines the review steps the Corps will take in its efforts to maximize quality, objectivity, utility, and integrity of information. The plan is posted to the Internet.

^cThe Corps forms a project team, which typically includes district staff, staff from other Corps offices, and representatives from a nonfederal sponsor. The project team is supported by Corps decision makers from the district, division, and headquarters, as well as technical experts.

^dA tentatively selected plan is the project alternative identified by the Corps team as meeting the project objectives. This plan undergoes further review before the Corps endorses it as a recommended alternative.

^eThe Corps project team determines whether decision-making authority should be at headquarters or the division based on a feasibility study's complexity and risks.

^fThe Chief of Engineers, a military officer, oversees the Corps' operations in the Civil Works Program and reports on civil works matters to the Assistant Secretary of the Army for Civil Works.

^gThe Corps then sends the Chief's report to the Assistant Secretary of the Army for Civil Works, who is responsible for compliance review and the formulation of the Army position. The review is coordinated with the Office of Management and Budget for Administration clearance and then sent to Congress for consideration.

The feasibility study process includes work the Corps undertakes to satisfy requirements under the National Environmental Policy Act (NEPA) and other environmental statutes.¹⁸ Under NEPA, federal agencies are to evaluate the potential effects of proposed projects on the environment.¹⁹ When the Corps determines that a water resources development project could have significant environmental effects, it must prepare an EIS.²⁰ The Corps issues a draft EIS as part of the overall draft feasibility report for public and stakeholder review and issues a final EIS when it issues its final feasibility report. Feasibility studies that require an EIS typically represent larger and more complex studies than those that do not require an EIS. According to a 2013 Congressional Research Service report, Corps feasibility studies that are larger and more complex tend to require additional funding and time when compared to less complex, smaller studies.²¹ While the Corps does not publish information on the length of time it takes to complete feasibility studies, our analysis of publicly available data showed that the median time it took the Corps to complete a feasibility study with an EIS was more than 7 years for those studies completed from 2008 through 2018.

Statutory Provisions for Accelerating Feasibility Studies

WRRDA 2014 contains provisions related to, among other things, accelerating the completion of feasibility studies for which an EIS is

¹⁸The Corps conducts all feasibility study activities in coordination with a nonfederal sponsor (e.g., a tribe, country, state, or local government), as applicable. As they relate to water resources development projects, these environmental statutes include the Endangered Species Act, the Fish and Wildlife Coordination Act, Magnuson-Stevens Fishery Conservation and Management Act, Coastal Zone Management Act, and Marine Mammal Protection Act.

¹⁹Pub. L. No. 91-190, 83 Stat 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347).

²⁰Under NEPA, the Corps prepares an environmental assessment to assess whether a project is expected to have significant environmental impacts. An environmental assessment is a concise public document that, among other things, briefly provides sufficient evidence and analysis for determining whether to prepare an EIS. 40 C.F.R. § 1508.9. If the agency determines that there are no significant impacts from the proposed action, then the agency prepares a finding of no significant impact that presents the reasons why the agency made that determination. If the agency determines the project may cause significant environmental impacts, it conducts an EIS.

²¹Congressional Research Service, *Environmental Requirements Addressed During Corps Civil Works Project Planning: Background and Issues for Congress* (Washington, D.C.: September 5, 2013).

prepared. These provisions broadly fall into different general categories, which we grouped as follows:

- **Coordination and administration.** These provisions are generally process oriented. Among other things, they relate to facilitating the process of coordinating and administering feasibility studies by, for example, encouraging the Corps and other agencies to coordinate early in the feasibility study process and resolve issues expeditiously.
- **Environmental review.** These provisions relate to implementing NEPA and other environmental statutes when conducting feasibility studies. For example, the Corps is to establish a program to measure and report on progress made to improve and expedite the planning and environmental review process.
- **Public transparency.** These provisions generally require the Corps to, among other things, make information publicly available on how it is implementing the acceleration provisions.

The Corps Has Taken Steps to Address Some Feasibility Study Acceleration Provisions but Not Others

The Corps has taken steps to address broad WRRDA 2014 provisions related to facilitating the process of coordinating and administering feasibility studies. For example:

- **Issuance of a joint coordination guide.** In September 2015, as a result of the act and previous ongoing coordination efforts, the Corps, NMFS, and FWS worked together to jointly issue a coordination guide for conducting feasibility studies.²² The guide discusses the feasibility study process in depth and emphasizes the importance of substantive, early engagement among the three agencies to successfully deliver projects and avoid delays later in the process that may result from lingering disagreements among the agencies.
- **Issuance of Corps guidance on WRRDA 2014 acceleration provisions.** In March 2018, the Corps issued guidance on how

²²U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration, *SMART Planning Feasibility Studies: A Guide to Coordination and Engagement with the Services* (Washington, D.C.: September 2015).

officials should implement the WRRDA 2014 acceleration provisions when conducting feasibility studies.²³ This includes guidance on implementing administrative changes such as deadlines for gathering agency or public comments. It also includes guidance on coordination within the agency as well as with other agencies and stakeholders, such as nonfederal sponsors. For example, WRRDA 2014 provides that the Corps is to make certain information available to other agencies as early as practicable in the environmental review process. The Corps' March 2018 guidance indicates that Corps officials are to provide information on the (1) environmental and socioeconomic resources located within the physical area associated with a feasibility study, and (2) general locations of the different alternatives under consideration. While the guidance was not issued for almost 4 years after the enactment of WRRDA 2014, several Corps headquarters and district officials said the Corps disseminated information on how to implement the acceleration provisions to the districts in various ways, such as through webinars and working with teams that had initiated feasibility studies subject to the act's acceleration provisions.

Many Corps headquarters, division, and district officials said that many of the act's coordination and administration provisions are similar to long-standing practices they followed, based on requirements in other laws such as NEPA. For example, according to many Corps headquarters, division, and district officials, the WRRDA 2014 provision to develop a coordinated environmental review process is generally consistent with NEPA and its implementing regulations. According to a Corps headquarters official, the WRRDA 2014 coordination provisions add specificity to the Corps' existing practices by detailing which agencies to involve in coordination efforts and when to involve them.

The Corps also has taken steps to address one of the WRRDA 2014 provisions related to public transparency. Specifically, the Corps is to annually prepare, and make publicly available, a list of feasibility studies subject to the acceleration provisions that do not have adequate funding to make substantial progress toward completion of the study. Corps headquarters and district officials said that in the past the Corps funded several hundred active feasibility studies at any given time. While this allowed for many feasibility studies to remain active and make some

²³U.S. Army Corps of Engineers, *Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Project Acceleration* (Washington, D.C.: March 2018). WRRDA 2014 required the Corps to issue this guidance, which addresses a variety of required acceleration activities under the act.

progress, it also made less funding available for individual feasibility studies and slowed the progress of some studies, according to several Corps officials. According to a February 2012 Corps policy memo, agency leadership initiated a process to review all active feasibility studies to determine which were the most viable for congressional funding. The Corps re-scoped or deactivated the remainder of the feasibility studies. Many Corps district and headquarters officials told us this allowed for increased funding for and progress to be made on the feasibility studies that remained active. As a result of the Corps' efforts, headquarters officials said the number of active Corps feasibility studies decreased from 653 in 2012 to 89 at the end of 2018.²⁴ In addition, they said that because active feasibility studies now have greater levels of funding, the agency has not had to report any active feasibility studies that do not have adequate funding.

However, as of May 2019, the Corps has not addressed other WRRDA 2014 provisions related to public transparency and environmental review. These include the following:

- **Status and progress database.** By June 2015, the Corps was to establish and maintain an electronic database and, in coordination with other federal and state agencies, issue reporting requirements to make publicly available the status and progress regarding compliance with applicable requirements of NEPA and other required approval or action.
- **Performance measurement.** The Corps is to establish a program to measure and report on progress made toward improving and expediting the planning and environmental review process.
- **Environmental review guidance.** The Corps is to (1) prepare, in consultation with the Council on Environmental Quality and other federal agencies with jurisdiction over actions or resources that may be impacted by a project, guidance documents that describe the coordinated environmental review processes the Corps intends to use to implement reforms for planning projects, and (2) issue guidance on the use of programmatic approaches for the environmental review process that carries out specified actions and meets specified requirements.

²⁴As of April 2019, the number of active feasibility studies had increased to 113, which includes 36 feasibility studies the Corps is conducting as part of the Bipartisan Budget Act of 2018. Pub. L. No. 115-123, 132 Stat. 64 (2018).

In other instances, the Corps has taken some initial steps but has not fully addressed certain WRRDA 2014 provisions. Specifically, not later than 180 days after the act's enactment, the Corps was to survey the agency's use of categorical exclusions in projects since 2005, publish a review of that survey, and solicit requests from other federal agencies and project sponsors for new categorical exclusions.²⁵ By June 2015, the Corps was to propose a new categorical exclusion if it identified a category of activities that merited such action. As of May 2019, the Corps had conducted an internal survey and solicited input through the *Federal Register* on its procedures for implementing NEPA.²⁶ However, Corps headquarters officials said they had not published a review of its survey, targeted requests for new categorical exclusions to other federal agencies and nonfederal sponsors, or proposed new exclusions as merited. Appendix II contains a more detailed summary of the WRRDA 2014 acceleration provisions, along with information on Corps actions to address each provision.

Corps headquarters officials identified resource constraints as the primary reason for not addressing some public transparency and environmental review provisions. For example, to develop environmental review guidance, Corps headquarters officials told us that they would need to conduct various steps, including drafting guidance, conducting administrative review with other federal agencies, soliciting public comment, and revising the guidance. Headquarters officials also said they were involved in a similar effort with other federal agencies to develop environmental review guidance in a publication called the 2015 Red Book, an effort they characterized as labor intensive.²⁷

²⁵A categorical exclusion is a category of actions that does not individually or cumulatively have a significant effect on the human environment and that has been found to have no such effect in procedures adopted by a federal agency in its implementation of NEPA regulations. 40 C.F.R. § 1508.4.

²⁶See 82 Fed. Reg. 33,470 (July 20, 2017).

²⁷The purpose of the 2015 Red Book is to serve as a "how to" for synchronizing environmental and other regulatory reviews for transportation and other infrastructure projects. See U.S. Department of Transportation in cooperation with U.S. Army Corps of Engineers, U.S. Coast Guard, Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration, *2015 Red Book: Synchronizing Environmental Reviews for Transportation and Other Infrastructure Projects*, Publication No. FHWA-HEP-15-047 (Washington, D.C.: September 2015).

In addition, to establish a database to publicly report on the status of its feasibility studies, Corps headquarters officials said they would need to stand up and maintain a website similar to the Federal Infrastructure Permitting Dashboard for federal infrastructure projects.²⁸ The Corps is one of many agencies involved in the effort to create and maintain this dashboard, and Corps headquarters officials said the effort was a resource-intensive process. Corps headquarters officials said that while they have not created the database required by WRRDA 2014, relevant information is available through the agency's annual public reports on active and recently completed feasibility studies' milestones and schedules.²⁹ Corps headquarters officials also said the status of feasibility studies is often available on the Corps districts' websites. However, this information is not easily accessible without knowing which district office is responsible for a given feasibility study.

While Corps officials identified resource constraints as the primary reason for not addressing certain WRRDA 2014 provisions, they did not provide specific estimates on the resources that the Corps would need to address these provisions. In addition, the officials said they do not have a plan that addresses how and when they intend to implement the provisions they have yet to address. We have previously reported on leading practices for sound planning and have found that implementation plans that include resource estimates help ensure organizations achieve their goals and

²⁸According to its website, the Federal Infrastructure Permitting Dashboard is an online tool for federal agencies, project developers, and interested members of the public to track the federal government's environmental review and authorization processes for large or complex infrastructure projects. It is part of a government-wide effort to improve coordination, transparency, and accountability. See <https://www.permits.performance.gov/about> (accessed May 26, 2019).

²⁹According to the Corps website, the Corps creates these reports in response to a WRRDA 2014 provision to submit an annual report listing all detailed project schedules for feasibility studies to the Senate Committee on Environment and Public Works and the House Committee on Transportation and Infrastructure. The Corps is then to make these annual reports publicly available, including on the internet, not later than 14 days after the Corps submits the report to Congress. Pub. L. No. 113-121, § 1002(c), 128 Stat. 1193, 1198 (2014).

objectives.³⁰ Such a plan would better position the Corps to address the remaining WRRDA 2014 provisions related to environmental review and public transparency.

The Corps Has Performed Some Review of Its Feasibility Study Acceleration Reforms but Has Not Conducted a Comprehensive Evaluation of Impacts

The Corps monitors feasibility studies and has done some review of its acceleration reforms but has not conducted a comprehensive evaluation of the impacts of these reforms. In terms of monitoring, Corps policy states that division and district leaders are responsible for monitoring feasibility studies within their areas of responsibility. According to Corps policy, districts are to prepare a quality control plan for each project to ensure compliance with all technical and policy requirements, and divisions are responsible for quality assurance by ensuring that districts plan, design, and deliver quality projects on schedule and within budget.³¹ Corps headquarters officials also said they monitor the progress of feasibility studies during management meetings, during which they discuss the cost and status of feasibility studies as well as the quality of those studies; such meetings are largely led by Corps management or by the Corps' Planning Advisory Board, which oversees the quality of feasibility studies.³²

³⁰Our leading practices for sound planning are derived from prior work related to planning. We have found that implementation plans that include these leading practices help ensure organizations achieve their goals and objectives. See, for example, GAO, *New Trauma Care System: DOD Should Fully Incorporate Leading Practices into Its Planning for Effective Implementation*, [GAO-18-300](#) (Washington, D.C.: Mar. 19, 2018); *Military Readiness: DOD Needs to Incorporate Elements of a Strategic Management Planning Framework into Retrograde and Reset Guidance*, [GAO-16-414](#) (Washington, D.C.: May 13, 2016); and *Managing for Results: Implementation Approaches Used to Enhance Collaboration in Interagency Groups*, [GAO-14-220](#) (Washington, D.C.: Feb. 14, 2014).

³¹U.S. Army Corps of Engineers, *Planning Guidance Notebook, Engineer Regulation 1105-2-100* (Washington, D.C.: April 2000).

³²The Planning Advisory Board aims to provide strategic advice to the Corps' Chief of Planning and Policy to support (1) the Corps' national planning capability, and (2) execution of the Civil Works program. The Planning Advisory Board is composed of senior Corps headquarters and division officials.

In addition to monitoring individual feasibility studies, Corps headquarters officials said they have conducted some broader reviews of how the acceleration reforms are progressing. For example, they conducted a trend analysis in October 2018 and again in April 2019 to identify the reasons why some feasibility studies have received exceptions from the timing and cost requirements of the 3x3x3 rule. These analyses, among other things, identified that some studies were too complex to be completed within 3 years or for less than \$3 million, according to Corps officials.³³ Furthermore, based on their experiences with various reform efforts, Corps officials said that they have been making real-time enhancements. For example, based on input from the Corps' Planning Advisory Board, Corps leadership has called for the agency to clarify its updated approach to risk management, according to Corps officials. These officials said each component within the Corps that is involved in conducting feasibility studies is to issue internal guidance on its risk management approach.

However, Corps headquarters officials said the Corps has not conducted a comprehensive evaluation of acceleration reforms to determine what impacts the reforms have had and whether any modifications to those reforms are needed. Corps and other agency officials and stakeholders we interviewed differed in their views of the acceleration reforms' impacts on the cost, time frames, and quality of feasibility studies:

- **Cost and time frames for completing feasibility studies.** Many Corps officials said they agreed with the overall goals of reducing costs and increasing the speed with which feasibility studies are carried out. Some Corps headquarters and district officials said SMART Planning and the 3x3x3 rule are changing the Corps' culture around the amount of time and cost a feasibility study should take. However, several Corps district and headquarters officials said some Corps staff are experiencing difficulties with the cultural change represented by SMART Planning and the 3x3x3 rule. For example, a Corps district official said that in the past some Corps navigation economists had one year to complete some modeling analyses for feasibility studies, but they now are to complete such work in 90 days due to the constraints of SMART Planning and the 3x3x3 rule, which has been a difficult adjustment. In addition, many Corps headquarters,

³³By statute, the Secretary of the Army may extend the timeline of a study if the Secretary determines that the feasibility study is too complex to comply with the 3x3x3 requirements, taking into account certain specified factors. 33 U.S.C. § 2282c(d).

division, and district officials raised concerns that the cost limitation of \$3 million may not be realistic given differences in cost across geographic locations or the loss of spending value over time caused by inflation.

- **Quality of feasibility studies.** Several Corps district officials we interviewed said they like the Corps' new policy of involving other agencies earlier in the process and with more frequency. They said they believe this approach has improved coordination with other agencies—by, for example, inviting the other federal agencies to join the Corps in a formal initiation meeting—which can in turn improve the overall quality of a feasibility study. However, some FWS and NMFS officials said they would like to be more involved and have better communication with the Corps than they currently do, such as throughout the feasibility study process rather than just at the beginning of a study and at the end when their formal review is requested. Similarly, several Corps headquarters, district, and division officials have commended the agency's new approach to risk management and stated that they aim to provide partner agencies with the information they need to conduct their work on the feasibility study. However, many Corps, FWS, and NMFS officials and nonfederal sponsors we interviewed said they were concerned that this new approach might result in insufficient information for making decisions, which could affect the quality of feasibility studies. For example, for six of the seven studies that we reviewed, officials from FWS and NMFS said it has become more difficult for them to provide meaningful input on the feasibility study alternatives considered because the Corps provides them with less detailed information than in the past.

Corps officials and other stakeholders we interviewed also expressed concern about possible impacts of the 3x3x3 rule on the quality of feasibility studies. For example, many Corps headquarters, division, and district officials said that because the 3x3x3 rule puts constraints on costs and time frames, if the scope of a feasibility study is not similarly reduced, it can affect the study's quality. In addition, nonfederal sponsors for four of the seven studies we examined expressed concerns with the 3x3x3 rule; three of these four nonfederal sponsors said they believe that the Corps is more focused on meeting the cost and schedule timelines than on the needs or quality of the study.

Senior Corps headquarters officials said they are confident that the cost and duration of feasibility studies has decreased overall as a result of the acceleration reforms but could not provide us with documentation to

support this observation. Specifically, officials said in March 2019 that based on analysis they had recently conducted, most feasibility studies are now being completed within 4 years and at a lower cost than feasibility studies undertaken prior to implementation of the 3x3x3 rule. While these results may not meet the 3x3x3 rule, officials said that these feasibility studies were the first subject to the acceleration reforms and may not depict the likelihood of future feasibility studies meeting the rule. This is, in part, because Corps officials who are working on new feasibility studies have the benefit of the past several years of experience working with the SMART Planning process. Further, Corps officials said that they do not have formal documentation summarizing how the acceleration reforms have affected the quality of their feasibility studies overall, but they monitor individual feasibility studies, as described earlier.

According to Corps headquarters officials, the Corps has not conducted a more comprehensive evaluation of the broader impacts of the acceleration reforms because it has only completed a small number of feasibility studies since 2012 under the acceleration reforms, and officials are focused on monitoring their ongoing individual studies. These officials said they see the value in conducting such an evaluation as they complete more studies but that they have not developed formal plans to do so. Effective program evaluation includes an evaluation plan—that is, a plan that takes into account the questions guiding the evaluation, the constraints faced in studying the program, and the information needs of the intended users.³⁴ Developing an evaluation plan would help position the Corps to conduct a timely and effective review of the impacts of the acceleration reforms overall.

The Corps Has Not Maintained Complete Milestone Data for Selected Feasibility Studies in Its Central Data System

The Corps has not maintained complete data on the 10 key milestones in its central data system for more than half of the feasibility studies we reviewed. Specifically, for the 19 feasibility studies we reviewed, we found that:

³⁴[GAO-12-208G](#).

- seven studies in the Corps' central data system included complete data for all 10 key milestones, and
- twelve studies were missing one or more milestones in the data system.

Table 1 provides information on the key milestone data included in the Corps' central data system for the 19 feasibility studies we reviewed.

Table 1: Summary of U.S. Army Corps of Engineers Key Milestones and the Number of Feasibility Studies with the Milestone Data in Its Central Data System for Feasibility Studies Initiated after June 10, 2014, through August 15, 2018

n/a Milestone	Number of feasibility studies with milestone date in the Corps' data system	
	Present	Missing
Initiation of the feasibility study process	17	2
Approval of project management plan ^a	16	3
Posting of plan for peer and stakeholder review ^b	16	3
Identification of possible alternatives for further evaluation	19	0
Identification of a single alternative	18	1
Release of draft report for public and stakeholder review	14	5
Final decision on whether the single alternative will become the recommended alternative	18	1
Submission of final report from the Corps district to its division	19	0
Submission of the final report from the Corps division to headquarters	17	2
Issuance of a signed Chief's report ^c	18	1

Source: GAO analysis of data from the Corps' central data system. | GAO-19-561

Note: The table includes the first 19 feasibility studies subject to the Water Resources Reform and Development Act of 2014 feasibility study acceleration provisions. The feasibility studies subject to these provisions are those initiated after June 10, 2014, the date the act was enacted, through August 15, 2018, and for which an environmental impact statement was prepared. The Corps' central data system, known as P2, is the Corps' project management system. P2 includes an enterprise-wide database for all project data using common milestone codes and definitions to facilitate reporting.

^aA project management plan outlines a feasibility study's work tasks, level of detail, and timelines for the project.

^bAccording to Corps documentation, a feasibility study's plan for peer and stakeholder review outlines the review steps the Corps will take in its efforts to maximize quality, objectivity, utility, and integrity of information. The plan is posted to the Internet.

^cThe Chief of Engineers, a military officer, oversees the Corps' operations in the Civil Works Program and reports on civil works matters to the Assistant Secretary of the Army for Civil Works. The Corps' Chief of Engineers Reviews the final feasibility report and signs a Chief's report to conclude the feasibility study. The Corps sends the Chief's report to the Assistant Secretary of the Army for Civil

Works, who is responsible for compliance review and the formulation of the Army position. The review is coordinated with the Office of Management and Budget for Administration clearance and then sent to Congress for consideration.

Many Corps headquarters and division officials said that Corps officials vary in their knowledge of its central data system. Many headquarters, division, and district officials we interviewed also acknowledged that, in general, the milestone information entered into the Corps' central data system can be inconsistent across different feasibility studies.

Corps headquarters officials said agency policy requires district officials conducting feasibility studies to enter data on 10 key milestones for each study into the agency's central data system. However, while the policy identified the 10 milestones, it only explicitly requires that two of the 10 milestones be entered into the agency's central data system.³⁵

Specifically, the policy states that officials are to enter into the Corps' data system the milestones for (1) feasibility study initiation and (2) posting of the plan for peer and stakeholder review. Corps officials said the intent of the policy is for all 10 key milestones to be entered into the central data system but acknowledged that the policy may not be clear. In part to assist district officials in conducting feasibility studies, Corps headquarters officials created a template, which includes information on nine of the 10 key milestones. In addition, a Corps district official said she was unclear on the agency's expectations about which milestones to enter into the central data system. Corps headquarters officials said they contact district officials responsible for feasibility studies to obtain up-to-date information and ensure they understand the progress of each feasibility study. While this may help to ensure accuracy and completeness of milestone data on feasibility studies, several Corps district officials said the process of responding to such data calls can be time consuming and take them away from their core responsibilities. Without clarifying its policy to help ensure district officials enter data on all key milestones for feasibility studies into its central data system, the Corps will not have complete data to efficiently monitor the progress of feasibility studies.

³⁵U.S. Army Corps of Engineers, *Execution of the Annual Civil Works Program*, EC 11-2-219 (Washington, D.C.: December 31, 2018).

Conclusions

The Corps has taken steps to address the acceleration provisions in WRRDA 2014, such as those related to coordination. However, it has not fully addressed provisions related to environmental review or public transparency. Corps officials said they do not have a plan that addresses implementation of remaining provisions or the resources that will be required to implement them. An implementation plan that includes resource estimates would better position the Corps to address the remaining provisions in WRRDA 2014.

Further, the Corps monitors the progress of feasibility studies and has conducted some reviews of the individual acceleration reforms. However, the agency has not developed an evaluation plan for its acceleration reforms to better understand the reforms' impacts overall and determine whether any modifications to those reforms are needed. Developing such a plan would enable the Corps to conduct a timely and effective evaluation.

Further, without clarifying its policy to ensure district officials enter all key milestone dates for feasibility studies into its central data system, the Corps will continue to lack complete data to efficiently monitor the progress of feasibility studies.

Recommendations for Executive Action

We are making the following three recommendations to the Department of Defense:

The Secretary of the Army should direct the Assistant Secretary of the Army for Civil Works to develop an implementation plan that includes resource estimates to address the remaining WRRDA 2014 acceleration provisions. (Recommendation 1)

The Secretary of the Army should direct the Assistant Secretary of the Army for Civil Works to develop a plan to conduct a comprehensive evaluation of the impacts of the agency's feasibility study acceleration reforms. (Recommendation 2)

The Secretary of the Army should direct the Assistant Secretary of the Army for Civil Works to clarify its policy to help ensure district officials

enter data on all key milestones for feasibility studies into its central data system. (Recommendation 3)

Agency Comments

We provided a draft of this report to the Department of Defense for review and comment. In its written comments, reprinted in appendix III, the Department concurred with our recommendations. The Department commented that we should redirect our recommendations to the Assistant Secretary of the Army for Civil Works rather than to the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers, which we did. The Department also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Secretary of the Department of the Interior, the Secretary of Commerce, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or FennellA@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



Anne-Marie Fennell
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

This report examines the extent to which the U.S. Army Corps of Engineers has (1) addressed the feasibility study acceleration provisions under the Water Resources Reform and Development Act of 2014 (WRRDA 2014), (2) reviewed the impact of its feasibility study acceleration reforms, and (3) maintained complete milestone data for feasibility studies in its central data system.

To conduct our work, we reviewed the first 19 feasibility studies subject to the WRRDA 2014 feasibility study acceleration provisions, among other things. These feasibility studies included those that (1) were initiated after June 10, 2014, the date WRRDA 2014 was enacted, through August 15, 2018, and (2) for which an environmental impact statement (EIS) is prepared. We chose to review studies through August 15, 2018, because after that date the Corps initiated several feasibility studies using funding in a supplemental appropriation the Corps received in February 2018 to conduct work in response to recent large hurricanes, and Corps officials said they planned to use a somewhat different approach to conducting these studies. For each study, we reviewed Corps guidance on the agency's process for planning feasibility studies and other related documentation. We examined information from the Corps on the progress and status of the 19 feasibility studies. We also reviewed information for each feasibility study on the Corps' business line or program, the district or division overseeing the study, and information on which studies had received exceptions from the 3x3x3 rule.¹

We also conducted a more in-depth review of seven of these 19 feasibility studies. We selected these seven studies because they represent different types of water resources development projects, were at varying stages of completion, and are geographically dispersed. The seven studies, and the Corps districts leading these studies, are:

¹The Corps established a policy that feasibility studies are to be completed in less than 3 years; at a cost of not more than \$3 million; and with the ongoing involvement of the Corps' district, division, and headquarters levels. The Corps refers to this as the 3x3x3 rule. The 3x3x3 rule was codified in WRRDA 2014. Pub. L. No. 113-121, § 1001(a), 128 Stat. 1193, 1196 (codified at 33 U.S.C. § 2282c(a)).

- Coastal Texas Protection and Restoration (Galveston District);
- Houston Ship Channel Expansion Channel Improvement Project (Galveston District);
- Matagorda Ship Channel (Galveston District);
- Gulf Intercoastal Waterway: Brazos River Floodgates and Colorado River Locks Systems (Galveston District);
- Mississippi River Ship Channel, Gulf to Baton Rouge, Louisiana General Reevaluation Report (New Orleans District);
- Sacramento River, General Reevaluation Report (Sacramento District);² and
- Port of Long Beach Deep Draft Navigation Improvements (Los Angeles District).

For each of these seven studies, we reviewed project management plans and other project documents, such as draft feasibility studies, if available. From August 2018 through November 2018, we visited the four district offices that led these seven studies, including the Corps' Galveston, Los Angeles, New Orleans, and Sacramento district offices. During these visits, we discussed the status and progress of each of these feasibility studies and the Corps' coordination with other federal agencies and nonfederal sponsors, among other things. For each study, we interviewed officials from nonfederal sponsors—such as the state or local government associated with individual studies—and from federal partners—including the Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). We selected FWS and NMFS because of the important role they play in reviewing environmental aspects of Corps feasibility studies and their role in the 2015 joint publication on coordination. We also interviewed Corps officials at the three divisions overseeing the districts that conducted the feasibility studies we selected. This included officials from the Corps' South Pacific, Mississippi Valley, and Southwestern divisions. While the seven studies provide illustrative examples, they are not generalizable to all of the Corps' feasibility studies for which an EIS is prepared.

We developed and used four standard sets of semi-structured interview questions for the following groups: the (1) Corps district office officials conducting the seven selected feasibility studies, (2) FWS and NMFS

²We reviewed this study in depth but learned during our review that it had been deactivated.

officials working with the Corps on these studies, (3) Corps division officials overseeing each study, and (4) nonfederal sponsors who worked with the Corps on each study.

To characterize the views of those we interviewed throughout the report, we defined modifiers to quantify officials' views as follows:

- “some” refers to responses from two to four Corps officials and/or stakeholders;
- “several” refers to responses from five to seven Corps officials and/or stakeholders; and
- “many” refers to responses from eight or more Corps officials and/or stakeholders.

To examine the extent to which the Corps addressed the WRRDA 2014 feasibility study acceleration provisions, we compiled a list of the provisions. We then reviewed the Corps' documentation related to the implementation of these provisions, including agency guidance and policies. We compared this information with the WRRDA 2014 acceleration provisions. To do this, we created categories for the acceleration provisions and grouped the provisions by category.

To examine the extent to which the Corps has reviewed the impact of its acceleration reforms, we reviewed Corps policy, guidance, training, and other documentation on implementation of those reforms. We use the term acceleration reforms to refer to the requirements that new feasibility studies are to be completed in less than 3 years and at a cost of not more than \$3 million, the Corps' risk management of feasibility studies through its new SMART Planning process, and the WRRDA 2014 acceleration provisions. We reviewed documentation from the Corps on the feasibility studies that have received exceptions from the 3x3x3 rule. We interviewed Corps headquarters officials to learn what, if any, (1) new policies were in place to help division and district staff implement the reforms; and (2) review or analysis headquarters officials had completed of the impacts of the reforms on the cost, time frames, or quality of feasibility studies. We also interviewed Corps districts and division officials who were responsible for the seven studies about how the acceleration reforms were working, as well as FWS and NMFS officials and nonfederal sponsors about their views of the impacts of the new

processes on their work on these feasibility studies. We compared this information with program evaluation guidance.³

To examine the extent to which the Corps has maintained complete milestone data for feasibility studies in its central data system, we obtained milestone data from the system for the 19 Corps feasibility studies in our review. We analyzed the milestone data to determine which milestone dates were in the system and then worked with Corps headquarters officials to verify that information. We assessed the reliability of these data by reviewing related documentation and interviewing knowledgeable officials, among other things. We determined that the data were sufficiently reliable for the purpose of understanding which districts and divisions conducted feasibility studies and for understanding the types of milestones that were entered into the central data system. However, as discussed in this report, we determined that the milestone data were not sufficiently reliable for other purposes. We reviewed data for all feasibility studies in our review to determine whether they conformed to Corps expectations on what milestone data should be in the system.⁴

We estimated the median time it took the Corps to complete a feasibility study for which an EIS was prepared. To do this, we obtained from the Corps website the names of all feasibility studies completed with a Chief's Report from July 2008 through June 2018 and the dates they were completed. We verified with Corps headquarters officials that its list of studies with a Chief's Report was current for that time frame. For each of these feasibility studies, we then found the associated notice of intent to complete an EIS as published in the *Federal Register*. While the date the Corps filed a notice of intent to complete an EIS is not the initiation date for the feasibility study, we used it as a proxy since Corps headquarters officials said that, in the past, the notice of intent was filed soon after a study was initiated. We calculated the time between the date the notice of intent was filed and the date of the Chief's report to arrive at an estimate of the amount of time the each feasibility study took to complete. We then calculated the median time it took to complete these feasibility studies.

³GAO, *Designing Evaluations: 2012 Revision (Supersedes PEMD-10.1.4)*, [GAO-12-208G](#) (Washington, D.C.: Jan. 31, 2012).

⁴U.S. Army Corps of Engineers, *Execution of the Annual Civil Works Program*, EC 11-2-219 (Washington, D.C.: December 31, 2018).

We conducted this performance audit from April 2018 to July 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform our audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: U.S. Army Corps of Engineers Project Acceleration Statutory Provisions and Corps Actions Related to Each Provision

Table 2: Summary of Project Acceleration Provisions Included in Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) and U.S. Army Corps of Engineers Actions Related to Each Provision

Category name	GAO summary of statutory provision	Corps actions related to provision
Coordination and Administration	Coordinated Environmental Review Process Requires the Corps to develop and implement a coordinated environmental review process for developing feasibility studies.	The Corps, the National Marine Fisheries Service (NMFS), and the U.S. Fish and Wildlife Service (FWS) jointly issued a coordination guide for conducting feasibility studies in September 2015. ^a The Corps also issued implementation guidance on the acceleration provisions of WRRDA 2014 (referred to as WRRDA 2014 acceleration guidance) in March 2018. ^b In addition, many Corps headquarters, district, and division officials said they have generally conducted such a coordinated environmental review process under the National Environmental Policy Act (NEPA). ^c A Corps official also pointed to relevant information in the agency's NEPA procedures ^d and guidance referred to as the Principles and Guidelines ^e and the Corps' Planning Guidance Notebook. ^f

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
	<p>Federal Agency Responsibilities When a Project Sponsor Serves as a Joint Lead Agency</p> <p>If the Corps allows a project sponsor that is a state or local governmental entity to serve as a joint lead agency, the project sponsor joint lead agency may prepare environmental review process documents under NEPA if the Corps, among other things:</p> <ul style="list-style-type: none"> • provides guidance, independently evaluates, and approves the document before taking subsequent action; and • ensures the project sponsor complies with all design and mitigation commitments. <p>In addition, any NEPA documents prepared in this way are to be adopted and used by any federal agency when making any determination to the same extent the agency could adopt or use a document prepared by another federal agency under NEPA.</p>	<p>The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, the Corps' NEPA procedures discourage the use of joint lead agencies.^d As of May 2019, Corps officials said they are not aware that any feasibility study subject to the acceleration provisions in WRRDA 2014 has had a joint lead agency.</p>
<p>Coordination and Administration</p>	<p>Designating Jurisdictional Agencies</p> <p>For all federal, state, and local governments and Indian tribes that may have jurisdiction over a project or that may be required to review some aspect of the feasibility study or make a determination on issuing a permit or other decision, the Corps must:</p> <ul style="list-style-type: none"> • identify these agencies as early as practicable, and • invite these agencies to participate or coordinate as early as practicable and set a deadline for response. <p>Any federal agency invited by the Corps will be designated as a cooperating agency unless that agency follows certain specified steps.</p>	<p>The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, a Corps expert on feasibility study processes indicated that portions of this provision are implemented under the Corps' NEPA procedures^d as well as the Principles and Guidelines^e and Planning Guidance Notebook.^f However, a Corps official said part of the provision is new—specifically, the part that designates any federal agency invited by the Corps as a cooperating agency unless that agency follows certain steps.</p>
	<p>Plan for Coordinating Input and Completing Environmental Review</p> <p>The Corps, after consultation with and with the concurrence of relevant entities^g is to establish a plan for coordinating public and agency participation in, and comment on, the environmental review process for each feasibility study or category of studies. As soon as practicable but not later than 45 days after the close of the public comment period on a draft Environmental Impact Statement (EIS), the Corps, after consultation with and with the concurrence of relevant entities, also is to establish, as a part of the coordination plan, a schedule for completing the environmental review process. In doing so, the Corps is to consider certain factors, provide the schedule to relevant entities, and make it available to the public.</p>	<p>The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, a Corps official indicated that portions of this provision are implemented under the Corps' NEPA procedures.^d</p>

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
	<p data-bbox="469 464 1000 516">Deadlines for Comment on Environmental Review Documents</p> <p data-bbox="469 527 1029 579">The Corps is generally, unless certain processes are followed, to establish deadlines of:</p> <ul data-bbox="469 590 992 726" style="list-style-type: none"> <li data-bbox="469 590 976 642">• not more than 60 days for agency or public comment on a draft EIS, and <li data-bbox="469 653 992 726">• not more than 30 days for agency and public comment on other environmental review documents. 	<p data-bbox="1065 464 1520 600">The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, a Corps official indicated similar timelines are specified in the Corps' NEPA procedures.^d</p>

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
Coordination and Administration	<p data-bbox="472 464 837 491">Issue Identification and Resolution</p> <p data-bbox="472 499 1052 657">The Corps, the cooperating agencies, and any participating agencies are required to work cooperatively to identify and resolve issues that could delay completion of the environmental review process or result in the denial of any approval required for the project study under applicable laws.</p> <ul data-bbox="472 665 1052 1640" style="list-style-type: none"> <li data-bbox="472 665 1052 852">• The Corps is to make information available to the cooperating and participating agencies as soon as practicable in the environmental review process regarding the environmental and socioeconomic resources located within the project area and the general locations of the alternatives under consideration. <li data-bbox="472 861 1052 1098">• Based on information from the Corps, cooperating and participating agencies are to identify as early as practicable any issues of concern regarding the potential environmental or socioeconomic impacts of the project, including any issues that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project study. <li data-bbox="472 1106 1052 1476">• On the request of a participating or cooperating agency or project sponsor, the Corps is to convene an issue resolution meeting with the relevant entities to resolve issues that may (1) delay completion of the environmental review process, or (2) result in denial of any approval required for the project study under applicable laws. Such a meeting is to be held not later than 21 days after the Corps receives the request for the meeting unless the Corps determines there is good cause to extend that deadline. Additionally, the Corps may convene an issue resolution meeting at its discretion, regardless of whether such a meeting is requested. <li data-bbox="472 1484 1052 1640">• If resolution cannot be achieved within 30 days of an issue resolution meeting and the Corps determines that all information necessary to resolve the issue has been obtained, the Corps is to forward the dispute to the heads of the relevant agencies for resolution. 	<p data-bbox="1068 464 1520 701">The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, a Corps official indicated that portions of this provision are implemented under the Corps' NEPA procedures^d and Planning Guidance Notebook.^f Many Corps district officials said they have used various strategies, such as meetings, to resolve issues with other agencies.</p>

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
Coordination and Administration	<p>Failure to Decide</p> <p>If a federal agency that is required to make a decision related to some aspect of the feasibility study—including issuing or denying a permit, license, statement, opinion, or other approval—has not made such a decision after 180 days after the application is complete or 180 days after the Corps issues a decision under NEPA, whichever is later:</p> <ul style="list-style-type: none"> • The Corps must notify the Senate Committee on Environment and Public Works and the House Committee on Transportation and Infrastructure as soon as practicable. The Corps must continue notifications every 60 days thereafter until all decisions have been made by the federal agency. • The amount of funds made available to support the office of the head of that federal agency must be reduced by certain specified amounts, subject to certain limitations. 	<p>The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b Corps headquarters officials said they have not needed to invoke financial penalties as of May 2019.</p>
	<p>Early Coordination to Avoid Delays and Duplication</p> <p>It is the sense of Congress that the Corps and other federal agencies with relevant jurisdiction in the environmental review process should cooperate with each other, state agencies, and Indian tribes at the earliest practicable time to avoid delays and duplication of efforts later in the process, among other things. To that end, coordination should include the development of policies and designation of staff to advise in that process. Related to this:</p> <ul style="list-style-type: none"> • Upon request by a state or project sponsor, and to the maximum extent practicable and appropriate, as determined by the agencies, the Corps and other federal agencies with relevant jurisdiction in the environmental review process are to provide technical assistance to the state or project sponsor in carrying out early coordination activities. • If requested by a state or project sponsor, the Corps, in consultation with other federal agencies with relevant jurisdiction, may establish memoranda of agreement with certain entities to carry out early coordination activities, subject to certain limitations. 	<p>The Corps, NMFS, and FWS jointly issued a coordination guide for conducting feasibility studies in September 2015.^a The Corps also issued its WRRDA 2014 acceleration guidance in March 2018.^b In addition, a Corps official indicated that portions of this provision are implemented under the agency's NEPA procedures^d and Planning Guidance Notebook^f as well as the Principles and Guidelines^e</p>
	<p>New Information</p> <p>The Corps is to consider information received after the close of a comment period if the information satisfies the requirements for a supplemental EIS under NEPA regulations.</p>	<p>The Corps issued its WRRDA 2014 acceleration guidance in March 2018.^b</p>

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
Coordination and Administration	<p>Corps to Facilitate Expeditious Resolution</p> <p>With respect to the environmental review process for any project study, the Corps is to have the authority and responsibility to (1) take actions as are necessary and proper and within the Corps' authority to facilitate the expeditious resolution of the environmental review process for the project study, and (2) prepare or ensure that any required EIS or other environmental review document required to be completed under NEPA is completed in accordance with applicable federal law.</p>	The Corps issued its WRRDA 2014 acceleration guidance in March 2018. ^b
Public Transparency	<p>Publishing Information on Studies with Inadequate Funding to Make Substantial Progress</p> <p>The Corps is to annually prepare and make publicly available a list of feasibility studies that the agency does not have adequate funding to make substantial progress toward the completion of the study.</p> <p>Status and Progress Database</p> <p>The Corps is to:</p> <ul style="list-style-type: none"> • not later than June 10, 2015, establish and maintain an electronic database and, in coordination with other federal and state agencies, issue reporting requirements to make publicly available the status and progress with respect to compliance with applicable requirements of NEPA and other required approval or action; and • publish the status and progress of any such required approval or action on a feasibility study. <p>Categorical Exclusions</p> <p>Not later than 180 days after June 10, 2014, the Corps is to:</p> <ul style="list-style-type: none"> • conduct an internal survey on its use of categorical exclusions since 2005, • publish a review of the survey that includes a description of certain specified information, and • solicit requests from other federal agencies and project sponsors for new categorical exclusions. <p>If the Corps identifies a category of activities that merits establishing a new categorical exclusion, the agency is also to propose new categorical exclusions by June 10, 2015.</p>	<p>The Corps has undertaken a multi-year effort to focus funding on the feasibility studies the agency determined are the most viable options for Congressional funding and then re-scope or deactivate the remaining studies.</p> <p>The Corps has not taken action as of May 2019.</p> <p>As of May 2019, the Corps had conducted an internal survey and solicited public input through the <i>Federal Register</i> on its procedures for implementing NEPA. However, Corps headquarters officials said they had not published a review of its survey, targeted requests for new categorical exclusions to other federal agencies and nonfederal sponsors, or proposed new exclusions as merited.</p>
Public Transparency	<p>Performance Measurement</p> <p>The Corps is to establish a program to measure and report on progress made toward improving and expediting the planning and environmental review process.</p>	The Corps has not taken action as of May 2019.

**Appendix II: U.S. Army Corps of Engineers
Project Acceleration Statutory Provisions and
Corps Actions Related to Each Provision**

Category name	GAO summary of statutory provision	Corps actions related to provision
Environmental Review	Guidance on Coordinated Environmental Review The Corps, in consultation with the Council on Environmental Quality and other federal agencies with jurisdiction over actions or resources that may be impacted by a project, is to prepare guidance documents that describe the coordinated environmental review processes that the Corps intends to use to implement the reforms for the planning of projects.	The Corps has not taken action as of May 2019. Corps officials said they have reached out to the Council on Environmental Quality several times and are waiting for feedback on preparing this guidance.
	Guidance on Programmatic Approaches to Environmental Review The Corps is to issue guidance on the use of programmatic approaches to carry out the environmental review process that carries out specified actions and meets specified requirements.	The Corps has not taken action as of May 2019.

Source: GAO analysis of section 1005 of WRRDA 2014. | GAO-19-561

^aU.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration, *SMART Planning Feasibility Studies: A Guide to Coordination and Engagement with the Services* (Washington, D.C.: September 2015).

^bU.S. Army Corps of Engineers, *Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014* (WRRDA 2014), Project Acceleration (Washington, D.C.: March 2018).

^cPub. L. No. 91-190, 83 Stat 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347).

^dU.S. Army Corps of Engineers, *Procedures for Implementing NEPA*, Regulation No. 200-2-2 (Washington, D.C.: March 1988).

^eU.S. Water Resources Council, *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (March 10, 1983). This document (Principles and Guidelines) outlines the standards and procedures that the Corps is to follow for planning water resources development projects. At the time the document was developed, the planning approach applied to the Corps, the Bureau of Reclamation, the Tennessee Valley Authority, and the Soil Conservation Service. Section 2031 of the Water Resources Development Act of 2007 required the Secretary of the Army to issue revisions to the Principles and Guidelines to ensure that they addressed certain considerations. Pub. L. No. 110-114, § 2031(b)(2), 121 Stat. 1041, 1082 (2007) (codified at 42 U.S.C. § 1962-3(b)(2)). In March 2013, the Council on Environmental Quality issued an update to the Principles and Guidelines, called the Principles and Requirements, and in December 2014 the council issued interagency guidelines. Together the Principles and Requirements and the guidelines revise and replace the 1983 Principles and Guidelines. However, the Corps has continued to use the original 1983 Principles and Guidelines because conference reports and explanatory statements accompanying the Corps' annual appropriations in recent years have directed it to do so.

^fU.S. Army Corps of Engineers, *Planning Guidance Notebook*, ER 1105-2-100 (April 22, 2000). This document provides detailed guidance on how to implement the general process outlined in the Principles and Guidelines for planning water resource projects.

^gFor the purpose of this table, the term "relevant entities" refers to each participating and cooperating agency and the project sponsor or joint lead agency, as appropriate.

Appendix III: Comments from the Department of Defense

Appendix III: Comments from the Department
of Defense



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

JUL 15 2019

Ms. Anne-Marie Fennell
Director
Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, D.C. 20548

Dear Ms. Fennell:

This is the Department of Defense (DoD) response to the GAO Draft Report, GAO-19-561, "WATER RESOURCES PROJECTS: Army Corps of Engineers Can Further Enhance Acceleration of Feasibility Studies," dated July 2019 (GAO Code 102756).

The DoD concurs with comment to the recommendations in the GAO report. Our comments to the recommendations are in Enclosure 1. Enclosure 2 is DoD's technical comments to the subject report. The DoD appreciates this opportunity to review the draft report. My point of contact is Mr. Theodore Kerr who can be reached at theodore.e.kerr.civ@mail.mil and 703-697-6985.

Sincerely,

A handwritten signature in purple ink, which appears to read "Edward E. Belk, Jr.", is positioned above the typed name.

EDWARD E. BELK, JR.
Deputy Assistant Secretary of the Army
Management and Budget

Encls

ENCLOSURE 1

GAO DRAFT REPORT DATED JULY 2019
GAO-19-561 (GAO CODE 102756)

“WATER RESOURCES PROJECTS: ARMY CORPS OF ENGINEERS CAN
FURTHER ENHANCE ACCELERATION OF FEASIBILITY STUDIES”

DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommends that the Secretary of the Army should direct the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers to develop an implementation plan that includes resource estimates to address the remaining WRRDA 2014 acceleration provisions.

DoD RESPONSE: Concur with comment. The GAO recommends that the Secretary of the Army should direct the **Assistant Secretary of the Army (Civil Works)** to develop an implementation plan that includes resource estimates to address the remaining WRRDA 2014 acceleration provisions.

RECOMMENDATION 2: The GAO recommends that the Secretary of the Army should direct the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers to develop a plan to conduct a comprehensive evaluation of the impacts of the agency’s feasibility study acceleration reforms.

DoD RESPONSE: Concur with comment. The GAO recommends that the Secretary of the Army should direct the **Assistant Secretary of the Army (Civil Works)** to develop a plan to conduct a comprehensive evaluation of the impacts of the agency’s feasibility study acceleration reforms.

RECOMMENDATION 3: The GAO recommends that the Secretary of the Army should direct the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers to clarify its policy to help ensure district officials enter data on all key milestones for feasibility studies into its central data system.

DoD RESPONSE: Concur with comment. The GAO recommends that the Secretary of the Army should direct the **Assistant Secretary of the Army (Civil Works)** to clarify its policy to help ensure district officials enter data on all key milestones for feasibility studies into its central data system.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Anne-Marie Fennell, (202) 512-3841 or fennella@gao.gov

Staff Acknowledgments

In addition to the contact named above, Vondalee R. Hunt (Assistant Director), Candace Carpenter (Analyst in Charge), Matthew Levie, and Rebecca Makar made key contributions to this report. In addition, Michael Armes, Justin Fisher, Gwen Kirby, Patricia Moye, and Kiki Theodoropoulos contributed to the report.

Appendix V: Accessible Data

Data Tables

Accessible Data for Figure 2: Major Steps in Developing a U.S. Army Corps of Engineers Water Resources Development Project

Step 1: Problem Identification

- Local community perceives or experiences a water resources problem, such as reducing the risks from coastal storms and flooding or maintaining navigation throughout the nation's ports and waterways, and contacts the Corps district office for help.
- The Corps has, or obtains, authorization from Congress to study the problem and receives an appropriation to do so.

Step 2: Feasibility Study

- The Corps investigates the problem and conducts a feasibility study. The Corps makes a recommendation on whether to pursue the project and how the problem should be addressed.
- If the Corps recommends pursuing the project, the Chief of Engineers prepares a report recommending the project for construction.

Step 3: Preconstruction Engineering and Design

- The Corps completes any additional planning studies and all of the detailed technical studies. The Corps also conducts other tasks such as finalizing the project's design, preparing construction plans and specifications, and drafting construction contracts for advertisement.

Step 4: Construction

- After Congress authorizes construction and provides an appropriation,^a the Corps manages the construction of the project.

Step 5: Operation and Maintenance

- The Corps may operate and maintain the constructed project (e.g. for navigation projects) or the nonfederal sponsor may operate and maintain the project (e.g. for coastal storm and flood related projects).

Accessible Data for Figure 3: U.S. Army Corps of Engineers Feasibility Study Phases, Key Milestones, and Target Timelines

1. Initiation: The Corps initiates a feasibility study.
2. Project management plan: The Corps approves its project management plan.^a
3. Review plan: The Corps posts its plan for peer and stakeholder review.^b
4. Alternatives: The Corps project team^c identifies a set of potential alternatives for further evaluation .
5. Tentatively selected plan: The Corps project team conducts an analysis and identifies a single alternative as a tentatively selected plan.^d
6. Draft report: The Corps issues a draft report with its analysis for public and stakeholder review.
7. Agency decision: Corps headquarters or the relevant division makes a decision on whether the tentatively selected plan it will be endorsed by the Corps and become the recommended alternative.^e
8. Final report to division: The Corps project team conducts additional analysis on the recommended alternative and releases a feasibility report with the team's updated analysis on the recommended alternative for review by its division.
9. Final report to headquarters: The Corps division reviews the report and sends it for review to Corps headquarters.
10. Chief's report: The Corps Chief of Engineers^f reviews the final feasibility report and signs a Chief's report to conclude the feasibility study.^g

Agency Comment Letter

Accessible Text for Appendix III Comments from the Department of Defense

Page 1

JUL 15 2019

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Natural Resources and Environment

U.S. Government Accountability Office

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Washington, D.C. 20548

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EDWARD E. BELK, JR.

Deputy Assistant Secretary of the Army Management and Budget

Encls

Page 2

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